

PATENT COOPERATION TREATY

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From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

WINCKELS,J.H.F.
c/o VEREENIGDE

Johan de Wittlaan 7

NL-2517 JR Den Haag
PAYS-BAS

28 SEP 2005

BEANTWOORD

Applicant's or agent's file reference

MP62022PC00

International application No.

PCT/NL 03/00463

International filing date (day/month/year)

23.06.2003

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year)

26.09.2005

IMPORTANT NOTIFICATION

Applicant

STICHTING ASTRON

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/B/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:



European Patent Office - P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl
Fax: +31 70 340 - 3016

Authorized Officer

Bergström, C

Tel. +31 70 340-2898



PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P62022PC00	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/NL 03/00463	International filing date (day/month/year) 23.06.2003	Priority date (day/month/year) 23.06.2003

International Patent Classification (IPC) or both national classification and IPC
H04B7/185

Applicant
STICHTING ASTRON

1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.
 - This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
 These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:
 - I Basis of the opinion
 - II Priority
 - III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV Lack of unity of invention
 - V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI Certain documents cited
 - VII Certain defects in the International application
 - VIII Certain observations on the international application

Date of submission of the demand 10.01.2005	Date of completion of this report 26.09.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Larcinese, A Telephone No. +31 70 340-3823 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/NL 03/00463

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-22 as originally filed

Claims, Numbers

2-18, 21, 22 as originally filed
1, 19, 20 filed with telefax on 09.09.2005

Drawings, Sheets

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/NL 03/00463

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to the report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-22
	No: Claims	
Inventive step (IS)	Yes: Claims	1-22
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-22
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/NL 03/00463

IAP20 Rec'd PCT/P10 22 DEC 2005

Re Item V**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: DE 196 39 414 A (SIEMENS AG) 2 April 1998 (1998-04-02)
- D2: US 2003/022649 A1 (VOYER NICOLAS) 30 January 2003 (2003-01-30)
- D3: US-A-5 929 804 (JONES TREVOR HOWAR PRICE ET AL) 27 July 1999 (1999-07-27)

The invention discloses a method (claim 1) for optimising at least one property of a satellite system. It also discloses the corresponding optimisation device (claim 19).

A method for optimising the parameters of an antenna array in a satellite system is disclosed in D3.

Referring to claim 1: the difference between claim 1 and D3 is the fact that an amount of data errors is determined in order to change one property of the satellite system, said amount being obtained by checking the received data.

This problem solves the problem of providing a more flexible way of changing, or optimising, a property of a satellite system.

Although D3 also optimises at least one property of the antenna array and so of the satellite system, the amount of data errors is not determined. The received data are not checked for obtaining an amount of errors.

D1 and D2 refer both to terrestrial mobile communications. None of them discloses the determination of an amount of data errors to be used to optimise at least one property of a satellite system.

The same reasoning applies to the other independent claim 19.

The subject-matter of claims 1 and 19 is therefore new (Article 33(2) PCT) and inventive (Article 33(3) PCT).

Claims 2-18,20,21 and 22 are dependent on claims 1 and 19 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/NL 03/00463

10/561879

P62022PC00

Amended claims

IAP20 Rec'd PC/T/PTU 22 DEC 2003

1. A method for optimising at least one property of a satellite system,

said satellite system comprising:

- a satellite provided with a transmitter for transmitting an satellite signal

representing data and

EPO - DG 1

- a satellite receiver for receiving said satellite signal,

14. 09. 2005

said method comprising:

(41)

- receiving at said satellite receiver the satellite signal;
- determining from the received satellite signal received data;
- checking said received data for an amount of data errors; and
- using the result of said checking to change said at least one property of the

satellite system if a result of said checking satisfies a predetermined

criterion.

19. An optimisation device for a satellite system, comprising
an optimisation input connectable to at least one signal output of at least one
satellite receiver for receiving at least one received satellite signal representing
received data;
a data error determining section communicatively connected to the optimisation
input, for determining an amount of data errors in said data;
a comparator for comparing said amount of data errors with a predetermined
criterion, said comparator having a comparator output for providing an adjust
signal if the amount of data errors satisfies said predetermined criterion;
an adjuster device for adjusting at least one property of the satellite system in
response to said adjust signal from the comparator output.

20. An satellite receiver, comprising

at least one antenna element;

at least one control device arranged for controlling at least one property of at

least one of the antenna elements; said control device having an input for

receiving a control signal and an output connected to a control input of the

antenna element;

at least one optimisation device as claimed in claim 19 communicatively

connected with its optimisation input to a signal output of the antenna element

and connected with an optimisation output to the input of the control device.